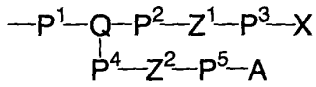
What is claimed is:

1. A photo- or thermo-polymerizable composition comprising an alkali-soluble polymerizable polymer that contains a structure represented by the following general formula (I) on a side chain:

General formula (I)



wherein X represents a polymerizable group; A represents an alkali-soluble group; Q represents a hydrocarbon linking group or a hetero ring; Z^1 and Z^2 each independently represent a single bond or a hydrocarbon linking group; P^1 to P^5 each independently represent a single bond, or a linking group constituted by a hydrogen atom, a nitrogen atom, an oxygen atom, a sulfur atom, and a carbonyl group (>C=O).

2. The photo- or thermo-polymerizable composition of claim 1, wherein a main chain of the alkali-soluble polymerizable polymer comprises at least one selected from the group consisting of polystyrene, polyacryl, and polymethacryl.

3. The photo- or thermo-polymerizable composition of claim 1, wherein the polymerizable group represented by X is a radical polymerizable group.

4. The photo- or thermo-polymerizable composition of claim 3, wherein the radical polymerizable group is contained in the alkali-soluble polymerizable polymer in an amount of 0.1 to 10.0 mmol per gram of the alkali-soluble polymerizable polymer.

5. The photo- or thermo-polymerizable composition of claim 1, wherein the alkali-soluble group represented by A is one selected from the group consisting of carboxylic acid, sulfonic acid imide, barbituric acid, and phenol.

6. The photo- or thermo-polymerizable composition of claim 1, wherein the alkali-soluble group represented by A is contained in the alkali-soluble polymerizable polymer in an amount of 0.1 to 10.0 mmol per gram of the alkali-soluble polymerizable polymer.

7. The photo- or thermo-polymerizable composition of claim 1, wherein Q is a hydrocarbon linking group having a cyclic structure.

8. The photo- or thermo-polymerizable composition of claim 1, wherein at least one of P^2 and P^3 is a linking group constituted by a hydrogen atom, a nitrogen atom, an oxygen atom, a sulfur atom, and a carbonyl group (>C=O).

9. The photo- or thermo-polymerizable composition of claim 1, wherein the structure represented by general formula (I) is contained in

the alkali-soluble polymerizable polymer in an amount of 0.1 to 10.0 mmol per gram of the alkali-soluble polymerizable polymer.

10. The photo- or thermo-polymerizable composition of claim 1, wherein a weight average molecular weight of the alkali-soluble polymerizable polymer is in a range of 3,000 to 500,000.

11. The photo- or thermo-polymerizable composition of claim 1, wherein a glass transition point (Tg) of the alkali-soluble polymerizable polymer is in a range of 70 to 300°C.

12. The photo- or thermo-polymerizable composition of claim 1, wherein the alkali-soluble polymerizable polymer is contained in the photo- or thermo-polymerizable composition in an amount of 5 to 100% by mass based on a total solid component of the photo- or thermo-polymerizable composition.

13. The photo- or thermo-polymerizable composition of claim 1, further comprising a polymerizable crosslinking agent having a molecular weight of 1,000 to 10,000.

14. The photo- or thermo-polymerizable composition of claim 15, wherein the polymerizable crosslinking agent is contained in the photo- or thermo-polymerizable composition in an amount of 5 to 90% by mass based on a total amount of the photo- or thermo-polymerizable

composition.

15. The photo- or thermo-polymerizable composition of claim 1, further comprising a polymerization initiator.

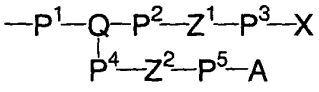
16. The photo- or thermo-polymerizable composition of claim 1, further comprising a sensitizing dye.

17. The photo- or thermo-polymerizable composition of claim 16, wherein the sensitizing dye has λ_{max} in a range of 330 nm to 700 nm.

18. The photo- or thermo-polymerizable composition of claim 16, wherein the sensitizing dye has λ_{max} in a range of 800 nm to 1300 nm.

19. A planographic printing plate precursor, comprising a support and a recording layer, wherein the recording layer contains a photo- or thermo-polymerizable composition that includes an alkali-soluble polymerizable polymer that contains a structure represented by the following general formula (I) on a side chain:

General formula (I)



wherein X represents a polymerizable group; A represents an alkali-

soluble group; Q represents a hydrocarbon linking group or a hetero ring; Z^1 and Z^2 each independently represent a single bond or a hydrocarbon linking group; and P^1 to P^5 each independently represent a single bond, or a linking group constituted by a hydrogen atom, a nitrogen atom, an oxygen atom, a sulfur atom, and a carbonyl group (>C=O).